CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1-17. (Cancelled).

18. (Currently Amended) A modem for symmetric bi-directional transporting of 100BaseTX Ethernet **frame data** over a telecommunications copper infrastructure, said modem comprising:

a 100BaseT port connected to a physical layer module adapted to receive and transmit 100BaseT Ethernet signals;

a data splitter adapted to split a received 100 Mbps Ethernet stream into one to four 25 Mbps data upstream signals;

a 100BaseS port having one to four DSL ports coupled to said data splitter, each DSL port is adapted to generate a separate upstream DSL signal from a 25 Mbps data upstream signal, each generated upstream DSL signal is coupled to a corresponding separate copper twisted pair wire connected to said DSL port, each DSL port is further adapted to receive a downstream DSL signal and to generate a 25 Mbps downstream signal, wherein each 25 Mbps downstream signal is received over said corresponding copper twisted pair wire; and

a data collection and reorganization unit coupled to said one to four DSL ports and adapted to assemble said one to four 25 Mbps downstream signals into a single 100 Mbps Ethernet data stream for transmission by said physical layer module.

19. (Previously Presented) A modem according to claim 18, comprising a flow and rate control memory for storing the 100 Mbps Ethernet data stream assembled by said data collection and reorganization unit, wherein the flow and rate control memory is provided to soak differences in transmitting rates between said 100BaseS port and said 100BaseT port.

20. (Previously Presented) A modem according to claim 19, further comprising a configuration and auto sense unit for sensing the number of DSL ports of the 100BaseS port installed in the modem.

21. (Previously Presented) A modem according to claim 20, further comprising a MII interface, which is connected to the physical layer module via a 2 port MII bridge.

22. (Previously Presented) A modem according to claim 21, further comprising a controller for configuring the MII interface, the data collection and reorganization unit and the data splitter depending on the number of DSL ports sensed by said configuration and auto sense unit.

23. (Previously Presented) A point to point facility transport system for the symmetrical bi-directional transport of 100BaseTX Ethernet frame data over N copper wire pairs connecting a central office facility to a customer premise, said system comprising:

N downstream data transmission paths for transporting a single 100BaseTX Ethernet signal from the central office facility to the customer premise, each downstream transmission path operative to transport a 25 Mbps data stream;

N upstream transmission paths for transporting a single 100BaseTX Ethernet signal from the customer premise to the central office facility, each upstream transmission path operative to transport a 25 Mbps data stream;

a first modem located at the central office facility and coupled to one end of said N downstream transmission paths and one end of said N upstream transmission paths;

a second modem located at the customer premises and coupled to the other end of said N downstream transmission paths and the other end of said N upstream transmission paths;

said first modem and said second modem operative to place onto and receive from said N copper wire pairs, data frames encapsulating said 100BaseTX Ethernet frame data;

said first modem and said second modem comprising:

a 100BaseT port connected to a physical layer module adapted to receive and transmit 100BaseT Ethernet signals;

a data splitter adapted to a split received 100 Mbps Ethernet stream into one to four 25 Mbps data upstream signals;

a 100BaseS port having one to four DSL ports coupled to said data splitter, wherein each DSL port is adapted to generate a separate upstream DSL signal from a 25 Mbps data upstream signal, each generated upstream DSL signal is coupled to a corresponding separate copper twisted pair wire connected to a DSL port, each DSL port is further adapted to receive a downstream DSL signal and to generate a 25 Mbps downstream signal, each 25 Mbps downstream signal is received over said corresponding copper twisted pair wire; and

a data collection and reorganization unit coupled to said one to four DSL ports and adapted to assemble said one to four 25 Mbps downstream signals to a single 100 Mbps Ethernet data stream for transmission by said physical layer module.

24. (Previously Presented) A facility transport system according to claim 23, wherein the downstream transmission path utilizes quadrature amplitude modulation (QAM) to transport said Ethernet frame data from said central office facility to said customer premise.

25. (Previously Presented) A facility transport system according to claim 23, wherein said upstream transmission path utilizes quadrature amplitude modulation (QAM) to transport said Ethernet frame data from said customer premise to said central office facility.

26. (Previously Presented) A facility transport system for a symmetrical bi-directional transport of 100BaseTX Ethernet frame data over N copper wire pairs connecting a central office facility to a customer premise, comprising:

N downstream transmission paths for transporting a single 100BaseTX Ethernet signal from the central office facility to the customer premise, said system each downstream transmission path operative to transport a 25 Mbps data stream;

N upstream transmission paths for transporting a single 100BaseTX Ethernet signal from the customer premise to the central office facility, each upstream transmission path operative to transport a 25 Mbps data stream;

a switch located at the central office facility and coupled to one end of said N downstream transmission paths and one end of said N upstream transmission paths;

a network element located at the customer premises and coupled to the other end of said N downstream transmission paths and the other end of said N upstream transmission paths;

said switch and said network element are operative to place onto and receive from said N copper wire pairs data frames encapsulating 100BaseTX Ethernet frame data and N is a positive integer in the range of one to four;

wherein each switch and network element comprise at least one modem comprising:

a 100BaseT port connected to a physical layer module adapted to receive and transmit 100BaseT Ethernet signals;

a data splitter adapted to split a received 100 Mbps Ethernet stream into one to four 25 Mbps data upstream signals;

a 100BaseS port having one to four DSL ports coupled to said data splitter, each DSL port is adapted to generate a separate upstream DSL signal from a 25 Mbps data upstream signal, each generated upstream DSL signal is coupled to a corresponding separate copper twisted pair wire connected to said DSL port,

each DSL port is further adapted to receive a downstream DSL signal and to generate a 25M bps downstream signal,

each 25 Mbps downstream signal is received over said corresponding copper twisted pair wire; and

a data collection and reorganization unit coupled to said one to four DSL ports and adapted to assemble said one to four 25 Mbps downstream signals into a single 100 Mbps Ethernet data stream for transmission by said physical layer module.

27. (Previously Presented) A facility transport system according to claim 26, wherein each downstream transmission path utilizes quadrature amplitude modulation (QAM) to transport said 100BaseTX Ethernet frame data from said central office facility to said customer premise.

28. (Previously Presented) A facility transport system according to claim 26, wherein each upstream transmission path utilizes quadrature amplitude modulation (QAM) to transport said 100BaseTX Ethernet frame data from said customer premise to said central office facility.